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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,611	12/15/2000	Hidefumi Mori	5000-4831	2189

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/738,611

Applicant(s)

MORI ET AL.

Examiner

Julian Mercado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 13 is/are rejected.
- 7) ☐ Claim(s) 12, 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Remarks*

This Office action is responsive to applicant's amendment filed November 25, 2003.

### *Claim Rejections - 35 USC § 102 and 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takei et al. (U.S. Pat. 5,958,614)

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takei et al. as applied to claims 1-3 above, in view Katoh et al. (U.S. Pat. 6,124,052)

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takei et al. as applied to claims 1-3 above, in view of Zimmern (U.S. Pat. 3,850,554)

The rejection(s) is maintained for the reasons of record

The examiner notes applicant's amendment to independent claim 1 now reciting that both the air supply mechanism and water supply mechanism are formed in a housing. Dependent claim 13 recites the housing as formed by a plurality of members. Regarding the amendment to independent claim 1 and new dependent claim 13, Takei et al. is considered to teach this feature insofar as both the air supply mechanism [16] and water supply mechanism [20] are employed in an automobile, thus, inherently it would naturally flow for the air supply mechanism and water supply mechanism to be formed in a housing as claimed, e.g. the housing or body panels of an

automobile which would comprise the frame, the hood, the fenders and doors, etc. Alternatively, absent of a showing by applicant that the claimed invention distinguishes over the reference, the skilled artisan would find obvious that components of an automobile's motor system would be contained within such a housing for reasons such as protection from the natural elements and preservation of structural integrity. *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) and *In re Spada*, 15 USPQ 2d 1655 (Fed. Cir. 1990)

As dependent claims 4 and 6 are pending as previously presented, the ground of rejection for each of these claims are maintained in their entirety and will not be reiterated.

Applicant's arguments have been fully considered, however they are not persuasive. Applicant submits that a housing within which both the air supply and water supply mechanisms are formed obviates the need for the injection pump [20] as in Takei et al.'s invention, an alleged improvement over the prior art. This is not persuasive, since Takei et al. is maintained herein to teach or at least suggest a housing. Further, the scope of the present claims do not preclude an injection pump from being part of the air supply system.

Arguments against Katoh et al. and Zimmern et al. appear to be directed to these references failing to remedy alleged differences between Takei et al. and the present claims. However, in view of Takei et al. being maintained for the reasons discussed above, the rejection in view of Katoh et al. and Zimmern et al. are subsequently maintained for the reasons discussed in the previous Office action.

***New Rejection***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lance (U.S. Pat. 4,517,259).

Regarding independent claim 1, Lance teaches an air supply system for a fuel cell [12] and an air supply mechanism [20]. (col. 3 line 1 et seq.) A water supply mechanism [14], i.e. “steam drum” separates water from exhaust gas discharged from the fuel cell, “[t]hese gases flow along the circulation duct 10 to the steam drum 14 where heat is removed from the exhaust gases and steam is generated from water (not shown)”. (col. 3 line 6-9) The air supply mechanism has an air supply chamber for supplying an oxygen-containing gas to the fuel cell, “[a] portion of the combined exhaust gas/air mixture exits the circulation duct through the air motor 20 to the compressor 18 inlet by passing through the air motor”. (col. 3 line 14-16) Thus, the air supply and water supply mechanisms are integrated to the extent that the combined exhaust gas/air mixture exiting the water supply mechanism [14] flow along the of circulation duct [10] and into the air supply mechanism. For purposes of discussion, the claimed air supply of the air motor is considered to be shown by the horizontally disposed intake portion, also containing the turbine [22], as shown in Figure 2.

As to the air supply mechanism and water supply mechanism being formed in a housing, Figure 1 is relied upon to show that both the air supply mechanism [20] and the water supply

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mechanism [14] are contained within the outer walls of the circulation duct [10]. The four outer walls shown are considered to read on the instant "plurality of housing members". (applies to dependent claim 13.

As to the air supply mechanism sealing and cooling the air supply chamber, this limitation has not been given patentable weight, as such language is construed as a statement of intended use which does not limit the claim to a particular or corresponding structure.

Regarding dependent claim 2, the air supply mechanism has two modes of operation, partial or full air motor flow, which corresponds to a change in the amount of air in the air motor with concomitant power level variations. (Table 2, col. 4 line 11-27)

#### *Allowable Subject Matter*

As set forth in the prior Office action, claims 5 and 7-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record and to the examiner's knowledge do not teach or render obvious the instant invention regarding a hole in the housing or liquefaction unit through which the water supply mechanism and air supply mechanism communicate.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

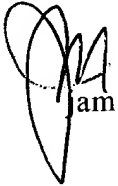
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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



am



Patrick Ryan  
Supervisory Patent Examiner  
Technology Center 1700